

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

THE COUNTY THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC PLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE UT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR TING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE VARIETY OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'91B53'

In Testimony Marcet, I have hereunto set my hand and caused the seal of the Flunt Antiety Protection Office to be affixed at the City of Washington, D.C. this twenty-fourth day of April, in the year of our Lord two thousand one.

Auri

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Icting Commissioner Plant Variety Protection Office Agricultural Marketing Service fary of Agriculture

AGRICULTURAL MARKETING SERVICE APPLICATION FOR PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse) 1. NAME OF APPLICANT(S) Pioneer Hi-Bred International, Inc. 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7300 NW 62nd Ave P.O. Box 1004 Johnston, Iowa 50131-1004 5. TELEPHONE (Inc. 6. FAX (Include as 515-270-358) 7. GENUS AND SPECIES NAME Glycine max L. 9. CROP KIND NAME (Common name) Soybean 10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common Corporation) 11. IF INCORPORATED, GIVE STATE OF INCORPORATION lowa 13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPI John Grace John Grace John Grace P.O. Box 1004 Johnston, Iowa 50131-1004 16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow Instructions on reverse) a. W Exhibit A. Origin and Breeding History of the Variety b. W Exhibit C. Objective Description of the Variety c. W Exhibit C. Objective Description of the Variety e. W Exhibit C. Statement of Description of the Variety Filing and Examination Fee (\$2400), made payable to "Treasurer of the United States" (Mail to PVPO) 17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED 1 YES 16 "Yos," answer items 18 and 19 below)	2a). uired in order to deteri	APPROVED - OMB NO. 0581-0055			
APPLICATION FOR PLAT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burdon statement on reverse) 1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Pioneer Hi-Bred International, Inc. 4. ADDRESS (Street and No., or R.F.D. No., City, Stata, and ZIP Code, and Country) 7. 300 NW 62nd Ave P.O. Box 1004 Johnston, Iowa 50131-1004 5. FAMILY NAME (Botanical) Cepturinosae 9. CROP KIND NAME (Common name) Soybean 10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common May 6, 1926 11. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common May 6, 1926 11. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common May 6, 1926 11. IF INCORPORATED, GIVE STATE OF INCORPORATION Own	uired in order to deter issued (7 U.S.C. 2424	The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).			
Pioneer Hi-Bred International, Inc. 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7300 NW 62nd Ave P.O. Box 1004 Johnston, Iowa 50131-1004 515-270-358 6. FAX (Include as 515-273-228 7. GENUS AND SPECIES NAME Glycine max L. Leguminosae 9. CROP KIND NAME (Common name) Soybean 10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partienhilip), association, etc.) (Common Corporation) 11. IF INCORPORATED, GIVE STATE OF INCORPORATION IOWA 13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPI John Grace John Grace John Standard Ave. P.O. Box 1004 Johnston, Iowa 50131-1004 16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow Instructions on reverse) a. M. Exhibit A. Origin and Breeding History of the Variety d. M. Exhibit D. Additional Description of the Variety d. M. Exhibit D. Statement of Distinctness v. M. Exhibit D. Statement of the Basis of the Applicant's Ownership f. M. Vuccher Sample (2,600 viable untreated seeds on, for tuber propagated varieties verification that tissue culture will be g. M. Exhibit C. Objective Description of the Variety 17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 18. ONLY THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 19. THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 19. THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 19. THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 19. THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 19. THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET 19. THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY ONLY A	Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidentia until certificate is issued (7 U.S.C. 2426).				
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7300 NW 62nd Ave P.O. Box 1004 Johnston, Iowa 50131-1004 7. GENUS AND SPECIES NAME Glycine max L. 8. FAMILY NAME (Botanical) Leguminosae 9. CROP KIND NAME (Common name) Soybean 10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common Corporation) 11. IF INCORPORATED, GIVE STATE OF INCORPORATION IOWA 13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPI John Grace John Grace Johnston, low 62nd Ave. P.O. Box 1004 Johnston, lows 50131-1004 16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow Instructions on reverse) a. W Exhibit A. Origin and Breeding History of the Variety b. W Exhibit C. Objective Description of the Variety d. Exhibit C. Additional Description of the Variety c. W Exhibit C. Additional Description of the Variety g. W Exhibit D. Additional Description of the Variety g. W Exhibit D. Additional Description of the Variety g. W Exhibit C. Statement of the Basis of the Applicant's Ownership 11. W Voucher Sample (2,500 viable untreased seeds or, for tuber propagated varieties verification that tissue culture will be g. W Exhibit C. Statement of the Basis of the Applicant's Ownership 19. W Exhibit C. Statement of the Basis of the Applicant's Ownership 10. W Outher Sample (2,500 viable untreased seeds or, for tuber propagated varieties verification that tissue culture will be g. W Exhibit C. Statement of the Basis of the Applicant's Ownership 19. W Outher Sample (2,500 viable untreased seeds or, for tuber propagated varieties verification that tissue culture will be GENERATIONS? 19. W Exhibit C. Statement of the Basis of the Applicant's Ownership 19. NO 11"no," go to Item (20) 10. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF 19. In Yess" TO ITEM 18, W 19. ON 10" Yes," give names of countries and dates) 19. Yes M Yes," anywer lowes the applican	UMBER 3.1	VARIETY NAME			
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Johnston, Iowa 50131-1004 Johnston, Iowa 50131-1000 6. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will b g. Filing and Examination Fee (\$2450), made payable to "Treasurer of the United States" (Mail to PVPO) 7. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIET YES	15.	FAX (include area code)			
a.		515-253-2288			
a.					
b. Exhibit B. Statement of Distinctness c. Exhibit C. Objective Description of the Variety d. Exhibit D. Additional Description of the Variety e. Exhibit E. Statement of the Basis of the Applicant's Ownership f. Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be g. Filing and Examination Fee (\$2450), made payable to "Treasurer of the United States" (Mail to PVPO) 17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED YES If "yes," answer items 18 and 19 below) NO If "no," go to item (20) 18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? YES NO POUNDATION 20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKET YES (If "yes," give names of countries and dates) U.S. 3/4/99 11. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replents applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the dur. The undersigned applicant(s) is/are) the owner/s) of this sexually reproduced or tuber propagated plant variety. and believe/s) Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is/are) informed that false representation herein can Jeopardize protection and result in penalties.					
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d.					
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PES If "yes," answer items 18 and 19 below) NO If "no," go to item (20) 8. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? YES NO FOUNDATION 19. IF "YES" TO ITEM 18, WE FOUNDATION 19. IF "YES" TO	SEED/Goo Soution 02/a)	attle District Date in Account			
GENERATIONS? YES NO FOUNDATION 0. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKET YES (If "yes," give names of countries and dates) NO U.S. 3/4/99 1. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replents applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the durant the understanded applicant(s) is/are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.	SEED (See Section 63(a)	or the Plant Variety Protection Act)?			
PYES NO FOUNDATION O. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKET ✓ YES (If "yes," give names of countries and dates) U.S. 3/4/99 1. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenis applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the duration of the discount of the propagated variety. And believe(s) Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.	VHICH CLASSES OF PRO	DUCTION BEYOND BREEDER SEED?			
VES (If "yes," give names of countries and dates) U.S. 3/4/99 1. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replents applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the dun. The undersigned applicant(s) is/are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.	REGISTERED	CERTIFIED			
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Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act, Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.		istinct. uniform, and stable as required			
		·			
SIGNATURE OF APPLICANT (OW					
	18r(s))				
Name (Please print or type) Name (Please print or type)					
D. John Grace III					
APACITY OR TITLE DATE / CAPACITY OR TITLE		DATE			
Soybean Research Coordinator /8/5/99					

Exhibit A. Origin and Breeding History of the Variety

Soybean Variety 91B53

Variety 91B53 evolved from a 1991 cross of Stine variety 0380 by Stine variety 3790.

It is an F₅-derived variety which was advanced to the F₅ generation by modified single seed descent. The F₆ progeny row of 91B53 was grown in the summer of 1995. Subsequently, 91B53 has undergone three years of extensive testing and purification and has been observed by the breeder to be uniform and stable for all plant traits from generation to generation, with no evidence of variants. On the basis of yield and iron deficiency chlorosis tolerance, variety 91B53 was assigned a commercial number.

Fifteen acres of 91B53 (breeders seed) were grown in the summer of 1997. Four hundred seventy acres of parent seedstock (foundation seed equivalent) were grown in the summer of 1998 and 20,000 bushels harvested.

Exhibit B. Statement of Distinctness

Soybean Variety 91B53

'91B53' is most similar to '9162'; however, '91B53' has low seed protein peroxidase activity and light tawny pubescence, whereas '9162' has high seed protein peroxidase activity and brown pubescence.

Table 1. Isozyme comparisons between Pioneer variety 91B53 and competitor varieties for PVP application.

Vallely	AC02	AC03	ACO4	ACP	PIA	ENP	IDH1	IDH2	HOM	MPI	PHIT
Pioneer 91B53	2	_	3	Y	В	Α	2	2	<u></u>	<	_
				·							
T8508	7	Υ-	က	٧	В	⋖	2	2	Ą	⋖	6
Stine ST1980	2	-	က	A	B	⋖	ļ			: ⊲	1 -
Debalb CX187	2	-	က	Α	В	A	2	2		. ∢	- 6

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SEED DIVISION - PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY

SOYBEA	N (Glycine max L.)
	MPORARY DESIGNATION VARIETY NAME
Pioneer Hi-Bred International, Inc.	91B53
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)	FOR OFFICIAL USE ONLY
7300 N.W. 62nd Ave., P.O. Box 1004	PVPO NUMBER 2 0 0 0 0 0 3 7
Johnston, IA 50131-1004	20000037
Choose the appropriate response which characterizes the variety in the fithe number of boxes provided, place a zero on the first box when number adequate soybean variety description. Other characters should be description.	eatures described below. When the number of significant digits in your answer is fewer than is 9 or less (e.g., 0 9). Starred characters * are considered fundamental to an ibed when information is available.
1. SEED SHAPE:	
[3]	w T
1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)	2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)	4 = Elongate Flattened (1/T ratio > 1.2; T/W > 1.2)
★ 2. SEED COAT COLOR: (Mature Seed)	· · · · · · · · · · · · · · · · · · ·
1 1 = Yellow 2 = Green 3 = Brown	4 = Black 5 = Other (Specify) <u>2</u>
3. SEED COAT LUSTER: (Mature Hand Shelled Seed)	
2 1 = Dull ('Corsoy 79'; 'Braxton')	2 = Shiny ('Nebsoy'; 'Gasoy 17')
★ 4. SEED SIZE: (Mature Seed)	
1 7 Grams per 100 seeds	
★ 5. HILUM COLOR: (Mature Seed)	
3 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5	= Imperfect Black 6 = Black 7 = Other (Specify)
★ 6. COTYLEDON COLOR: (Mature Seed)	
1 = Yellow 2 = Green	
★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:	
1 1 = Low 2 = High	
★ 8. SEED PROTEIN ELECTROPHORETIC BAND:	
1 = Type A (SP1 a) 2 = Type B	(SP1 b)
★ 9. HYPOCOTYL COLOR:	
1 = Green only ('Evans'; 'Davis')	2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'P	ickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')
★ 10. LEAFLET SHAPE:	
3 1 = Lanceolate 2 = Oval 3 = Ova	te 4 = Other (Specify)
FORM LMGS-470-57 (6-83) (Edition of 2-82 is obsolete.)	Page 1 of 4

(Edition of 2-82 is obsolete.)

Variety Name 91B53

			variety Harrie Dipoe
	11. LEAFLET SIZE: 1 = Small ('Amsoy 71'; 'A5312') 3 = Large ('Crawford'; 'Tracy')	2 = Medium ('Corsoy 79'; 'Gasoy 17')	
	12. LEAF COLOR: 1 = Light Green ('Weber'; 'York') 3 = Dark Green ('Gnome'; 'Tracy')	2 = Medium Green ('Corsoy 79'; 'Braxton')	
\star	13. FLOWER COLOR:		
•		3 = White with purple throat	
*	14. POD COLOR:		
*	2 1 = Tan 2 = Brown 3	3 = Black	
^			
	2 1 = Gray 2 = Brown (Tawny)	(Light Tawny)	
	16. PLANT TYPES:		
	2 1 = Slender ('Essex'; 'Amsoy 71') 2 3 = Bushy ('Gnome'; 'Govan')	? = Intermediate ('Amcor'; 'Braxton')	
*	17. PLANT HABIT:		
	3 1 = Determinate ('Gnome'; 'Braxton') 3 = Indeterminate ('Nebsoy'; 'Improved Pe	2 = Semi-Determinate ('Will') lican')	
*	18. MATURITY GROUP:		
Γ		-I 5W (W 5-W	0. 17
L	9 = VI 10 = VII 11 = VIII 12		8 = V
*	19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Sus	sceptible; 2 = Resistant)	
	BACTERIAL DISEASES:		
	★ 0 Bacterial Pustule (Xanthomonas phased	oli var. sojensis)	
	★ 1 Bacterial Blight (Pseudomonas glycinea)		
	★ 0 Wildfire (Pseudomonas tabaci)		
	FUNGAL DISEASES:		
	★ 1 Brown Spot (Septoria glycines)		
	Frogeye Leaf Spot (Cercospora sojina)		
	★ 0 Race 1 0 Race 2 0 Rac	ee 3 0 Race 4 0 Race 5	O Other (Specify)
	Target Spot (Corynespora cassiicola)		
	O Downy Mildew (Peronospora trifoliorum va	ar. manshurica)	
	Powdery Mildew (Microsphaera diffusa)	-	
	Brown Stem Rot (Cephalosporium gregatu	um)	
	O Stem Canker (Diaporthe phaseolorum var.	caulivora)	

Variety N	Name	911	B53
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19. DISEASES REACTION:	(Enter 0 = Not Tested; 1 = Susceptible; 2	= Resistant) (Continued)							
FUNGAL DISEASES: (200	000037						
★ 1 Pod and Stem Blig	nt (Diaporthe phaseolorum var; sojae)								
0 Purple Seed Stain	(Cercospora kikuchii)								
1 Rhizoctonia Root F	ot (Rhizoctonia solani)								
Phytophthora Rot	(Phytophthora megasperma var. sojae)								
★ 1 Race 1 0 R	ace 2 1 Race 3 0 Race 4 1	Race 5 0 Race 6	0 Race 7						
0 Race 8 0 R	ace 9 Other (Specify)								
VIRAL DISEASES:	<u>.</u>								
1 Bud Blight (Tobacc	co Ringspot Virus)								
1 Yellow Mosaic (Be	n Yellow Mosaic Virus)								
★ 1 Cowpea Mosaic (C	owpea Chlorotic Virus)								
Pod Mottle (Bean F	od Mottle Virus)	•							
★ 1 Seed Mottle (Soybe	an Mosaic Virus)								
NEMATODE DISEASES									
Soybean Cyst Nema	tode (Heterodera glycines)	1							
	ce 2 Race 3 Race 4	Other (Specify)							
Lance Rematore (7)	Lance Nematode (Hopiolaimus Colombus)								
★ 0 Southern Root Knot	Nematode (Meloidogyne incognita)								
	Nematode (Meloidogyne Hapla)								
Peanut Root Knot N	ematode (Meloidogyne arenaria)								
Reniform Nematodo	(Rotylenchulus reniformis)								
0 OTHER DISEASE NO	OT ON FORM (Specify)								
20. PHYSIOLOGICAL RESPO	DNSES: (ENTER 0 = Not tested, 1 = Suscep	tible, 2 = Resistant)							
★ 2 Iron Chlorosis on Ca	Icareois Soil								
Other (Specify)									
21. INSECT REACTION: (EN	TER 0 = Not tested, 1 = Susceptible, 2 = Re	sistant)							
Mexican Bean Beetle	(Epilachna Varivestis)								
Potato Leaf Hopper	Empoasca fabae)								
Other (Specify)									
22. INDICATE WHICH VARIE	TY MOST CLOSELY RESEMBLES THAT SU	BMITTED.							
CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY						
Plant Shape	9162	Seed Coat Luster	92B21						
Leaf Shape	9162	Seed Size	9162						
Leaf Color	9162	Seed shape	9232						
Leaf Size	90B31	Seedling Pigmentation	9162						

FORM LMGS-470-57 (6-83)

Variety Name 91B53

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS	PLANT LODGING	CM PLANT	LEAFL	ET SIZE	SEED CON	TENT	SEED SIZE	NO.
· · · · · · · · · · · · · · · · · · ·	MATURITY	SCORE	HEIGHT	CM Width	CM Length	% Protein	% Oil	G/100 SEED	SEEDS POD
Submitted 91B53	124.8	1.5	80.8			37.2	17.8	17.2	3
Name of Similar Variety 9151	124.6	2.0	76.5			36.1	19.6	20.6	3

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

- 1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
- 2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
- 3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A2 in the USDA soybean germplasm collection. Crop. Sci., 13: 420-421
- 4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1:1-19

Exhibit D. Additional Description of the Variety

Soybean Variety 91B53

In Exhibit C we have identified variety 91B53 as susceptible to bacterial blight, brown spot, pod and stem blight, rhizoctonia root rot, bud blight, yellow mosaic, cowpea mosaic, pod mottle and seed mottle.

This does not mean that variety 91B53 is any worse for these problems than other varieties of similar maturity. Rather, we do not consider 91B53 to be immune to these problems. Therefore, we have chosen to be conservative and have identified the line as "susceptible".

If the maturity groups were divided into tenths, the relative maturity for 91B53 would be 1.5.

AGRICULTURAL MARKETING SERVICE	1974 (5 U.S.C. 552a) and the Paperwork R	
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to de certificate is to be issued (7 U.S.C. 2- until certificate is issued (7 U.S.C. 24	421). Information is held confidentia
1. Name Of Applicant(s)	Temporary Designation Or Experimental Number	3. Variety Name
Pioneer Hi-Bred International, Inc.		91B53
4. Address (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)	5. Telephone (include area code)	6. Fax (include area code)
7300 NW 62nd Ave	515-270-3582	_ 515-253-2288
P.O. Box 1004 Johnston, Iowa 50131-1004	7. PVPO Number 0 0 0	0037
8. Does the applicant own all rights to the variety? Mark an "X" in appropriat	e block. If no, Please explain.	YES NO
9. Is the applicant (individual or company) a U.S. national or U.S. based com If no, give name of country 10. Is the applicant the original owner? YES Y NO	If no, please answer one of the followi	✓ YES □ NO
a. If original rights to variety were owned by individual(· ——	_
YES NO If no, give name of count	try	
b. If original rights to variety were owned by a company YES NO If no, give name of count		5. based company?
11. Additional explanation on ownership (If needed, use reverse for extra	space):	
PLEASE NOTE:		
Plant variety protection can be afforded only to owners (not licensees) who r	meet one of the following criteria:	
1. If the rights to the variety are owned by the original broader, that necess	must be a U.S. national national of a l	IPOV member country

- If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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